AUTHOR INDEX TO VOLUME 114

Amos, R.D., see E.D. Simandiras 114 (1987) 9
Andzelm, J., see N. Russo 114 (1987) 331

Baer, M., see N. Sathyamurthy 114 (1987) 73
Baer, M., see Y.C. Zhang 114 (1987) 267
Bailey, R.T., F.R. Cruickshank, R. Guthrie, D. Pugh and I.J.M. Weir, Vibrational relaxation rate constants for SF_6 from thermal lensing studies 114 (1987) 411
Balint-Kurti, G.G., see M.M. Novak 114 (1987) 221
Banna, M.S., H. Kossmann and V. Schmidt, A study of valence ionization of ammonia with synchrotron radiation 114 (1987) 157
Barat, M., see M. Durup-Ferguson 114 (1987) 389
Baum, J., see D. Suter 114 (1987) 103
Beijerinck, H.C.W., see E.J.W. van Vliembergen 114 (1987) 117
Brenot, J.C., see M. Durup-Ferguson 114 (1987) 389
Breton, J., see C. Letzelter 114 (1987) 273
Brodovitch, J.-C., see S.-K. Leung 114 (1987) 399
Broida, M., see A. Persky 114 (1987) 85
Buenker, R.J., see A. Metropoulos 114 (1987) 1

Cartwright, D.C. and P.J. Hay, Potential energy curves and spectral properties for electronic states of F_2 and F_2^+ 114 (1987) 305
Clary, D.C., see M.M. Novak 114 (1987) 221
Clouthier, D.J., R.H. Judge and D.C. Moule, The laser excitation spectrum of selenoformaldehyde: vibrational analyses of the $\tilde{A}\ ^1A_2 \leftarrow \tilde{X}\ ^1A_1$ and $\tilde{a}\ ^3A_2 \leftarrow \tilde{X}\ ^1A_1$ electronic transitions 114 (1987) 417
Craig, D.P., R.N. Lindsay, J.F. Ogilvie and D. Stehlik, Crystal constraints and photochemical H-transfer in the acridine–fluorene mixed crystal 114 (1987) 259
Cruickshank, F.R., see R.T. Bailey 114 (1987) 411

Dargelos, A., see J. Fernandez 114 (1987) 201
Deperasińska, I. and J. Prochorow, Reaction of exciplex formation in the gas phase. Potential curve crossing approach 114 (1987) 251
Donaldson, D.J., see J.D. Goddard 114 (1987) 321
Duguay, B., see P. Halvick 114 (1987) 375
Durup-Ferguson, M., J.C. Brenot, J.A. Fayeton, K. Provost and M. Barat, Dynamical competition between reactive and reactive detachment channels in $X^- + H_2$ colliding systems (X = Cl, Br, I) 114 (1987) 389

Eidelsberg, M., see C. Letzelter 114 (1987) 273

Fayeton, J.A., see M. Durup-Ferguson 114 (1987) 389

Fernandez, J., C. Teichteil and A. Dargelos, Ab initio calculations of spin–orbit coupling in the SnH_4^+ ion 114 (1987) 201
Fisz, J.J., Symmetry simplifications in the description of molecular order and reorientational dynamics in uniaxial molecular systems. I. Symmetry constraints on the joint probability distribution function 114 (1987) 165
Förner, W., Coupled cluster studies. IV. Analysis of the correlated wavefunction in canonical and localized orbital basis for ethylene, carbon monoxide, and carbon dioxide 114 (1987) 21
Francisco, J.S. and I.H. Williams, Structural and spectral consequences of ion pairing. II. A theoretical study of $ClO_3^- Li^+$ and $ClO_3^- Na^+$ 114 (1987) 339

Girard, C., J.M. Vigoureux, D. van Labeke and Ph. Grossel, Effective polarizability of two interacting adsorbed atoms 114 (1987) 209
Goddard, J.D., D.J. Donaldson and J.J. Sloan, Hydrogen bonded complexes and the HF vibrational energy distributions from the reaction of F atoms with NH_2 and NH_3 114 (1987) 321
Grossel, Ph., see C. Girard 114 (1987) 209
Guthrie, R., see R.T. Bailey 114 (1987) 411

Halvick, P., J.C. Rayez, M.T. Rayez and B. Duguay, Three-atom indirect exchange reactions. II. Dynamical behaviours explained by a simple model 114 (1987) 375
Handy, N.C., see E.D. Simandiras 114 (1987) 9
Hartmann, E., see W. Winkler 114 (1987) 347
Hay, P.J., see D.C. Cartwright 114 (1987) 305

Ichimura, T., M. Takahashi and Y. Mori, Collisional deactivation of highly vibrationally excited hexafluorobenzene molecules 114 (1987) 111
Ishii, K., see H. Nakayama 114 (1987) 431

Janssens, M.F.M., see E.J.W. van Vliembergen 114 (1987) 117
Jaspar, J.P.M.J., see E.J.W. van Vliembergen 114 (1987) 117
Jørgensen, K.A., A ^{17}O NMR study. On the correlation of ionization potentials and ^{17}O chemical shifts in 4-substituted pyridine-N-oxides and 4-substituted N-(benzylidene)phenylamine-N-oxides 114 (1987) 443
Joseph, T., see N. Sathyamurthy 114 (1987) 73
Judge, R.H., see D.J. Clouthier 114 (1987) 417

Kaashoek, G.H., see E.J.W. van Vliembergen 114 (1987) 117
Kawazumi, H. and T. Ogawa, Dissociation of water by controlled electron impact: rotational and translational energies of $OH(X\ ^2\Pi_i)$ fragment 114 (1987) 149
Komorowski, L., Electronegativity and hardness in the chemical approximation 114 (1987) 55
Koningstein, J.A., see P. Myslynski 114 (1987) 137
Korolenko, E.C., see A.I. Kruppa 114 (1987) 95
Kossmann, H., see M.S. Banna 114 (1987) 157
Kouri, D.J., see Y.C. Zhang 114 (1987) 267
Kruppa, A.I., T.V. Leshina, R.Z. Sagdeev, E.C. Korolenko and N.V. Shokhirev, Low-field CIDNP study of photoinduced electron transfer reactions 114 (1987) 95
Kurian, J. and A.K. Sreekanth, Laser schlieren study of vibrational relaxation of N_2 by H_2O 114 (1987) 295

Lee, L.C. and M. Suto, Fluorescence yields from photodissociative excitation of chloromethanes by vacuum ultraviolet radiation 114 (1987) 423
Leshina, T.V., see A.I. Kruppa 114 (1987) 95
Letzelter, C., M. Eidelsberg, F. Rostas, J. Breton and B. Thieblemont, Photoabsorption and photodissociation cross sections of CO between 88.5 and 115 nm 114 (1987) 273
Leung, S.-K., J.-C. Brodovitch, K.E. Newman and P.W. Percival, Muonium diffusion in ice 114 (1987) 399
Lindsay, R.N., see D.P. Craig 114 (1987) 259
Linert, W., The isokinetic relatioship. V. Investigation of bimolecular reaction systems 114 (1987) 449
Linert, W., The isokinetic relatiøship.VI. Equilibrium systems 114 (1987) 457
Liu, S.B., see D. Suter 114 (1987) 103

Metropoulos, A., C.A. Nicolaides and R.J. Buenker, Adiabatic calculations of the $^2\Sigma_g^+$ excited states of He_2^+ 114 (1987) 1
Minaev, B.F., see Yu.A. Serebrennikov 114 (1987) 359
Mori, Y., see T. Ichimura 114 (1987) 111
Moule, D.C., see D.J. Clouthier 114 (1987) 417
Myslynski, P. and J.A. Koningstein, Time-resolved electronic Raman spectrum of terbium aluminum garnet excited with visible and UV laser sources 114 (1987) 137

Nakayama, H. and K. Ishii, Raman spectra and phase transition of the phenothiazine crystal 114 (1987) 431
Newman, K.E., see S.-K. Leung 114 (1987) 399
Nicolaides, C.A., see A. Metropoulos 114 (1987) 1
Novak, M.M., G.G. Balint-Kurti and D.C. Clary, Distorted wave calculations of vibrational excitation in CO_2 + He and CO_2 + Ar collisions 114 (1987) 221

Ogawa, T., see H. Kawazumi 114 (1987) 149
Ogilvie, J.F., see D.P. Craig 114 (1987) 259
Olivares del Valle, F.J. and J. Tomasi, A simple model for molecular vibrations in solution: application to hydrogen fluoride and its dimer in polar and non-polar solvents 114 (1987) 231

Paidarová, I., see J. Vojtík 114 (1987) 369
Paniagua, M. and E. San-Fabian, Two-configuration potential energy surface for the Ca + HF → CaF + H reaction 114 (1987) 241
Percival, P.W., see S.-K. Leung 114 (1987) 399
Persky, A. and M. Broida, Quasiclassical trajectory study of the reaction $O(^3P)$ + HI → OH + I 114 (1987) 85
Pines, A., see D. Suter 114 (1987) 103
Polák, R. and J. Vojtík, Valence bond diatomics-in-molecules models of the NH_2 radical 114 (1987) 43
Prochorow, J., see I. Deperasińska 114 (1987) 251
Provost, K., see M. Durup-Ferguson 114 (1987) 389
Pugh, D., see R.T. Bailey 114 (1987) 411

Rayez, J.C., see P. Halvick 114 (1987) 375
Rayez, M.T., see P. Halvick 114 (1987) 375
Rostas, F., see C. Letzelter 114 (1987) 273

Russo, N., J. Andzelm and D.R. Salahub, LCGTO MP LSD calculations for the diatomics PdX (X = C,Si,Ge,Sn) 114 (1987) 331

Sagdeev, R.Z., see A.I. Kruppa 114 (1987) 95
Salahub, D.R., see N. Russo 114 (1987) 331
San-Fabian, E., see M. Paniagua 114 (1987) 241
Sathyamurthy, N., M. Baer and T. Joseph, Resonances in collinear He + H_2^+ collisions 114 (1987) 73
Schamps, J., see J.M. Sennesal 114 (1987) 37
Schmidt, V., see M.S. Banna 114 (1987) 157
Schneider, F., see J. Vojtík 114 (1987) 369
Sennesal, J.M. and J. Schamps, Electronic states of titanium monoxide. An ab initio study 114 (1987) 37
Serebrennikov, Yu.A. and B.F. Minaev, Magnetic field effects due to spin–orbit coupling in transient intermediates 114 (1987) 359
Shirts, R.B., The identification of normal mode behavior in the resonance picture of local mode dynamics: normal mode splitting, stability of periodic orbits and energy transfer rates for coupled Morse oscillators 114 (1987) 187
Shokhirev, N.V., see A.I. Kruppa 114 (1987) 95
Simandiras, E.D., R.D. Amos and N.C. Handy, The analytic evaluation of second-order Møller–Plesset (MP2) dipole moment derivatives 114 (1987) 9
Sloan, J.J., see J.D. Goddard 114 (1987) 321
Sreekanth, A.K., see J. Kurian 114 (1987) 295
Stehlí̆, D., see D.P. Craig 114 (1987) 259
Sulkes, M., Spectroscopy of jet-cooled perylene-d_{12} 114 (1987) 289
Suter, D., S.B. Liu, J. Baum and A. Pines, Multiple quantum NMR excitation with a one-quantum hamiltonian 114 (1987) 103
Suto, M., see L.C. Lee 114 (1987) 423

Takahashi, M., see T. Ichimura 114 (1987) 111
Teichteil, C., see J. Fernandez 114 (1987) 201
Thieblemont, B., see C. Letzelter 114 (1987) 273
Tomasi, J., see F.J. Olivares del Valle 114 (1987) 231

Van Labeke, D., see C. Girard 114 (1987) 209
Van Lanen, M.M.M., see E.J.W. van Vliembergen 114 (1987) 117
Van Vliembergen, E.J.W., E.J.D. Vredenbregt, G.H. Kaashoek, J.P.M.J. Jaspar, M.M.M. van Lanen, M.F.M. Janssens, M.J. Verheyen and H.C.W. Beijerinck, Energy dependence of rotational and vibrational distributions of $N_2(C)$ for the $Ar^*(^3P_{0,2}) + N_2(X)$ excitation transfer reaction 114 (1987) 117
Verheyen, M.J., see E.J.W. van Vliembergen 114 (1987) 117
Vetter, R., see W. Winkler 114 (1987) 347
Vigoureux, J.M., see C. Girard 114 (1987) 209
Vojtík, J., see R. Polák 114 (1987) 43
Vojtík, J., I. Paidarová and F. Schneider, Non-adiabatic coupling in the autoionizing He($2\,^3S$)–H_2 system 114 (1987) 369
Vredenbregt, E.J.D., see E.J.W. van Vliembergen 114 (1987) 117

Weir, I.J.M., see R.T. Bailey 114 (1987) 411
Williams, I.H., see J.S. Francisco 114 (1987) 339

Winkler, W., R. Vetter and E. Hartmann, Mössbauer isomer shift calibration of ^{119}Sn using pseudopotential and Xα SW calculations 114 (1987) 347

Zhang, Y.C., Z.-H. Zhang, D.J. Kouri and M. Baer, Infinite order sudden approximation treatment of the $H + D_2 \rightarrow HD + D$ reaction 114 (1987) 267
Zhang, Z.-H., see Y.C. Zhang 114 (1987) 267

LIST OF SUBJECTS

1 METHODS

1.1 Theoretical

1.1.1 Group theory and algebras
1.1.2 Classical mechanics
1.1.3 Quantized field theory *
1.1.4 Many body and quasiparticle approaches
1.1.5 Coupling schemes and perturbative treatments
1.1.6 Relativistic quantum mechanics
1.1.7 Transport quantum mechanics *
1.1.8 Equilibrium statistical mechanics *
1.1.9 Statistical mechanics of stationary states
1.1.10 Non-equilibrium thermodynamic and hydrodynamic theories *
1.1.11 Ab initio schemes for stationary properties
1.1.12 Computational and simulation methods
1.1.13 Molecular dynamics and scattering theory

1.2 Experimental

1.2.1 Magnetic resonances
1.2.2 Cyclotron resonance *
1.2.3 Microwave spectroscopy *
1.2.4 Infrared spectroscopy
1.2.5 Raman spectroscopy
1.2.6 Visible and UV spectroscopy
1.2.7 Fluorescence spectroscopy
1.2.8 Photoelectron and Auger spectroscopy
1.2.9 X-ray spectroscopy *
1.2.10 Electron impact spectroscopy
1.2.11 Laser methods
1.2.12 Picosecond spectroscopy *
1.2.13 Non-linear optical spectroscopy *
1.2.14 Synchrotron spectroscopies
1.2.15 Coherent optical spectroscopy *
1.2.16 Optical pumping *
1.2.17 Multiple resonance spectroscopy *
1.2.18 Optoacoustic spectroscopy *
1.2.19 Atomic and molecular beam techniques
1.2.20 Time-resolved experiments
1.2.21 Mass spectrometry *
1.2.22 Radiolysis
1.2.23 Mössbauer spectroscopy
1.2.24 X-ray, electron and neutron diffraction *
1.2.25 Neutron scattering *
1.2.26 Light scattering
1.2.27 Field emission and field ionization *
1.2.28 Measurement of macroscopic variables *

2 OBJECTS

2.1 Bulk systems

2.1.1 Gases
2.1.2 Supersonic beams
2.1.3 Liquids neat *
2.1.4 Liquid mixtures and solutions
2.1.5 Crystals
2.1.5.1 neat *
2.1.5.2 mixed
2.1.6 Glasses
2.1.7 Liquid crystals
2.1.8 Polymers
2.1.9 Semiconductors *
2.1.10 Metals and alloys *
2.1.11 Thin films *
2.1.12 Surfaces
2.1.13 Low-dimensional materials *
2.1.14 Dielectrics *
2.1.15 Plasmas *
2.1.16 Biological systems

2.2 Microscopic systems

2.2.1 Atoms
2.2.2 Molecules (neutral and ionic)
2.2.2.1 diatomic
2.2.2.2 small polyatomics
2.2.2.3 aromatics
2.2.2.4 other large *
2.2.2.5 polymeric and biological *
2.2.3 Molecular aggregates *
2.2.3.1 dimers
2.2.3.2 van der Waals molecules *
2.2.3.3 clusters *
2.2.3.4 complexes
2.2.4 Free radicals (including hydronium and muonium)
2.2.5 Quasiparticles (including excitons)
2.2.6 Defects and impurities *
2.2.7 Ions and charge carriers

* Denotes subject not covered in this volume.

3 PHENOMENA

3.1 Molecular structure
3.2 Vibrations and rotations of molecules
3.3 Electronic structure and states
3.4 Electric and magnetic properties
3.5 Spin splittings
3.6 Optical activity
3.7 Molecular interactions
3.8 Spectral bandshapes and intensities
3.9 Coupling of electronic and nuclear motion
3.10 Energy transfer processes
3.11 Molecular photophysical processes
3.12 Intramolecular dynamics *
3.12.1 radiationless transitions *
3.12.2 vibrational energy distribution (including vibrational dissociation)
3.13 Luminescence spectra, yields and lifetimes
3.14 Coherence loss processes *
3.15 Non-linear responses (including optical)
3.16 Multiphoton phenomena
3.17 Reactions (including dissociation)
3.17.1 gas phase
3.17.2 condensed phase *
3.17.3 photochemical
3.18 Tunnelling *
3.19 Electron transfer
3.20 Positron annihilation *
3.21 Ionization (including Rydberg states)
3.22 Molecular motion (including diffusive)
3.23 Isotopic effects
3.24 Fluctuations and noise *
3.25 Collective motion and excitations
3.26 Surface effects and catalysis *
3.27 Thermodynamic and transport properties *
3.28 Structure of solids and liquids
3.29 Critical phenomena
3.30 Phase transitions

SUBJECT INDEX TO VOLUME 114

METHODS

Theoretical

Group theory and algebras

Symmetry simplifications in the description of molecular order and reorientational dynamics in uniaxial molecular systems. I. Symmetry constraints on the joint probability distribution function, J.J. Fisz 114 (1987) 165

Classical mechanics

The identification of normal mode behavior in the resonance picture of local mode dynamics: normal mode splitting, stability of periodic orbits and energy transfer rates for coupled Morse oscillators, R.B. Shirts 114 (1987) 187

Many body and quasiparticle approaches

Coupled cluster studies. IV. Analysis of the correlated wavefunction in canonical and localized orbital basis for ethylene, carbon monoxide, and carbon dioxide, W. Förner 114 (1987) 21

Coupling schemes and perturbative treatments

Adiabatic calculations of the $^2\Sigma_g^+$ excited states of He_2^+, A. Metropoulos, C.A. Nicolaides and R.J. Buenker 114 (1987) 1
Coupled cluster studies. IV. Analysis of the correlated wavefunction in canonical and localized orbital basis for ethylene, carbon monoxide, and carbon dioxide, W. Förner 114 (1987) 21
Effective polarizability of two interacting adsorbed atoms, C. Girard, J.M. Vigoureux, D. van Labeke and Ph. Grossel 114 (1987) 209
Distorted wave calculations of vibrational excitation in $CO_2 + He$ and $CO_2 + Ar$ collisions, M.M. Novak, G.G. Balint-Kurti and D.C. Clary 114 (1987) 221

Relativistic quantum mechanics

Ab initio calculations of spin–orbit coupling in the SnH_4^+ ion, J. Fernandez, C. Teichteil and A. Dargelos 114 (1987) 201
Mössbauer isomer shift calibration of ^{119}Sn using pseudopotential and Xα SW calculations, W. Winkler, R. Vetter and E. Hartmann 114 (1987) 347

Statistical mechanics of stationary states

The isokinetic relatioship. V. Investigation of bimolecular reaction systems, W. Linert 114 (1987) 449
The isokinetic relatioship.VI. Equilibrium systems, W. Linert 114 (1987) 457

Ab initio schemes for stationary properties
Adiabatic calculations of the $^2\Sigma_g^+$ excited states of He_2^+, A. Metropoulos, C.A. Nicolaides and R.J. Buenker 114 (1987) 1
The analytic evaluation of second-order Møller–Plesset (MP2) dipole moment derivatives, E.D. Simandiras, R.D. Amos and N.C. Handy 114 (1987) 9
Coupled cluster studies. IV. Analysis of the correlated wavefunction in canonical and localized orbital basis for ethylene, carbon monoxide, and carbon dioxide, W. Förner 114 (1987) 21
Electronic states of titanium monoxide. An ab initio study, J.M. Sennesal and J. Schamps 114 (1987) 37
A simple model for molecular vibrations in solution: application to hydrogen fluoride and its dimer in polar and non-polar solvents, F.J. Olivares del Valle and J. Tomasi 114 (1987) 231
Two-configuration potential energy surface for the Ca + HF → CaF + H reaction, M. Paniagua and E. San-Fabian 114 (1987) 241
Potential energy curves and spectral properties for electronic states of F_2 and F_2^+, D.C. Cartwright and P.J. Hay 114 (1987) 305
Hydrogen bonded complexes and the HF vibrational energy distributions from the reaction of F atoms with NH_2 and NH_3, J.D. Goddard, D.J. Donaldson and J.J. Sloan 114 (1987) 321
LCGTO MP LSD calculations for the diatomics PdX (X = C, Si, Ge, Sn), N. Russo, J. Andzelm and D.R. Salahub 114 (1987) 331
Structural and spectral consequences of ion pairing. II. A theoretical study of $ClO_3^- Li^+$ and $ClO_3^- Na^+$, J.S. Francisco and I.H. Williams 114 (1987) 339
Mössbauer isomer shift calibration of ^{119}Sn using pseudopotential and Xα SW calculations, W. Winkler, R. Vetter and E. Hartmann 114 (1987) 347

Computational and simulation methods
Valence bond diatomics-in-molecules models of the NH_2 radical, R. Polák and J. Vojtík 114 (1987) 43
Reaction of exciplex formation in the gas phase. Potential curve crossing approach, I. Deperasińska and J. Prochorow 114 (1987) 251
Crystal constraints and photochemical H-transfer in the acridine–fluorene mixed crystal, D.P. Craig, R.N. Lindsay, J.F. Ogilvie and D. Stehlik 114 (1987) 259
Mössbauer isomer shift calibration of ^{119}Sn using pseudopotential and Xα SW calculations, W. Winkler, R. Vetter and E. Hartmann 114 (1987) 347
Magnetic field effects due to spin–orbit coupling in transient intermediates, Yu.A. Serebrennikov and B.F. Minaev 114 (1987) 359
Three-atom indirect exchange reactions. II. Dynamical behaviours explained by a simple model, P. Halvick, J.C. Rayez, M.T. Rayez and B. Duguay 114 (1987) 375

Molecular dynamics and scattering theory
Resonances in collinear He + H_2^+ collisions, N. Sathyamurthy, M. Baer and T. Joseph 114 (1987) 73
Quasiclassical trajectory study of the reaction $O(^3P) + HI \rightarrow OH + I$, A. Persky and M. Broida 114 (1987) 85
Distorted wave calculations of vibrational excitation in CO_2 + He and CO_2 + Ar collisions, M.M. Novak, G.G. Balint-Kurti and D.C. Clary 114 (1987) 221
Two-configuration potential energy surface for the Ca + HF → CaF + H reaction, M. Paniagua and E. San-Fabian 114 (1987) 241

Infinite order sudden approximation treatment of the $H + D_2 \rightarrow HD + D$ reaction, Y.C. Zhang, Z.-H. Zhang, D.J. Kouri and M. Baer 114 (1987) 267
Non-adiabatic coupling in the autoionizing He($2\ ^3S$)–H_2 system, J. Vojtík, I. Paidarová and F. Schneider 114 (1987) 369
Three-atom indirect exchange reactions. II. Dynamical behaviours explained by a simple model, P. Halvick, J.C. Rayez, M.T. Rayez and B. Duguay 114 (1987) 375
Dynamical competition between reactive and reactive detachment channels in $X^- + H_2$ colliding systems (X = Cl, Br, I), M. Durup-Ferguson, J.C. Brenot, J.A. Fayeton, K. Provost and M. Barat 114 (1987) 389

Experimental

Magnetic resonances

Low-field CIDNP study of photoinduced electron transfer reactions, A.I. Kruppa, T.V. Leshina, R.Z. Sagdeev, E.C. Korolenko and N.V. Shokhirev 114 (1987) 95
Multiple quantum NMR excitation with a one-quantum hamiltonian, D. Suter, S.B. Liu, J. Baum and A. Pines 114 (1987) 103
Muonium diffusion in ice, S.-K. Leung, J.-C. Brodovitch, K.E. Newman and P.W. Percival 114 (1987) 399

Infrared spectroscopy

The identification of normal mode behavior in the resonance picture of local mode dynamics: normal mode splitting, stability of periodic orbits and energy transfer rates for coupled Morse oscillators, R.B. Shirts 114 (1987) 187

Raman spectroscopy

Time-resolved electronic Raman spectrum of terbium aluminum garnet excited with visible and UV laser sources, P. Myslynski and J.A. Koningstein 114 (1987) 137
Raman spectra and phase transition of the phenothiazine crystal, H. Nakayama and K. Ishii 114 (1987) 431

Visible and UV spectroscopy

Energy dependence of rotational and vibrational distributions of $N_2(C)$ for the $Ar^*(^3P_{0,2}) + N_2(X)$ excitation transfer reaction, E.J.W. van Vliembergen, E.J.D. Vredenbregt, G.H. Kaashoek, J.P.M.J. Jaspar, M.M.M. van Lanen, M.F.M. Janssens, M.J. Verheyen and H.C.W. Beijerinck 114 (1987) 117
Photoabsorption and photodissociation cross sections of CO between 88.5 and 115 nm, C. Letzelter, M. Eidelsberg, F. Rostas, J. Breton and B. Thieblemont 114 (1987) 273
The laser excitation spectrum of selenoformaldehyde: vibrational analysis of the $\tilde{A}\ ^1A_2 \leftarrow \tilde{X}\ ^1A_1$ and $\tilde{a}\ ^3A_2 \leftarrow \tilde{X}\ ^1A_1$ electronic transitions, D.J. Clouthier, R.H. Judge and D.C. Moule 114 (1987) 417

Fluorescence spectroscopy

Dissociation of water by controlled electron impact: rotational and translational energies of OH($X\ ^2\Pi_i$) fragment, H. Kawazumi and T. Ogawa 114 (1987) 149
Photoabsorption and photodissociation cross sections of CO between 88.5 and 115 nm, C. Letzelter, M. Eidelsberg, F. Rostas, J. Breton and B. Thieblemont 114 (1987) 273
Spectroscopy of jet-cooled perylene-d_{12}, M. Sulkes 114 (1987) 289

The laser excitation spectrum of selenoformaldehyde: vibrational analysis of the $\tilde{A}\ ^1A_2 \leftarrow \tilde{X}\ ^1A_1$ and $\tilde{a}\ ^3A_2 \leftarrow \tilde{X}\ ^1A_1$ electronic transitions, D.J. Clouthier, R.H. Judge and D.C. Moule 114 (1987) 417

Photoelectron and Auger spectroscopy
A study of valence ionization of ammonia with synchrotron radiation, M.S. Banna, H. Kossmann and V. Schmidt 114 (1987) 157

Electron impact spectroscopy
Dissociation of water by controlled electron impact: rotational and translational energies of $OH(X\ ^2\Pi_i)$ fragment, H. Kawazumi and T. Ogawa 114 (1987) 149

Laser methods
Collisional deactivation of highly vibrationally excited hexafluorobenzene molecules, T. Ichimura, M. Takahashi and Y. Mori 114 (1987) 111
Spectroscopy of jet-cooled perylene-d_{12}, M. Sulkes 114 (1987) 289
Laser schlieren study of vibrational relaxation of N_2 by H_2O, J. Kurian and A.K. Sreekanth 114 (1987) 295
Vibrational relaxation rate constants for SF_6 from thermal lensing studies, R.T. Bailey, F.R. Cruickshank, R. Guthrie, D. Pugh and I.J.M. Weir 114 (1987) 411
The laser excitation spectrum of selenoformaldehyde: vibrational analysis of the $\tilde{A}\ ^1A_2 \leftarrow \tilde{X}\ ^1A_1$ and $\tilde{a}\ ^3A_2 \leftarrow \tilde{X}\ ^1A_1$ electronic transitions, D.J. Clouthier, R.H. Judge and D.C. Moule 114 (1987) 417

Synchrotron spectroscopies
A study of valence ionization of ammonia with synchrotron radiation, M.S. Banna, H. Kossmann and V. Schmidt 114 (1987) 157

Atomic and molecular beam techniques
Energy dependence of rotational and vibrational distributions of $N_2(C)$ for the $Ar^*(^3P_{0,2}) + N_2(X)$ excitation transfer reaction, E.J.W. van Vliembergen, E.J.D. Vredenbregt, G.H. Kaashoek, J.P.M.J. Jaspar, M.M.M. van Lanen, M.F.M. Janssens, M.J. Verheyen and H.C.W. Beijerinck 114 (1987) 117
Dynamical competition between reactive and reactive detachment channels in $X^- + H_2$ colliding systems (X = Cl,Br,I), M. Durup-Ferguson, J.C. Brenot, J.A. Fayeton, K. Provost and M. Barat 114 (1987) 389

Time-resolved experiments
Time-resolved electronic Raman spectrum of terbium aluminum garnet excited with visible and UV laser sources, P. Myslynski and J.A. Koningstein 114 (1987) 137
Laser schlieren study of vibrational relaxation of N_2 by H_2O, J. Kurian and A.K. Sreekanth 114 (1987) 295
Muonium diffusion in ice, S.-K. Leung, J.-C. Brodovitch, K.E. Newman and P.W. Percival 114 (1987) 399

Radiolysis
Muonium diffusion in ice, S.-K. Leung, J.-C. Brodovitch, K.E. Newman and P.W. Percival 114 (1987) 399

Mössbauer spectroscopy
Mössbauer isomer shift calibration of ^{119}Sn using pseudopotential and Xα SW calculations, W. Winkler, R. Vetter and E. Hartmann 114 (1987) 347

Light scattering
Raman spectra and phase transition of the phenothiazine crystal, H. Nakayama and K. Ishii 114 (1987) 431

OBJECTS

Bulk systems

Gases
Ab initio calculations of spin–orbit coupling in the SnH_4^+ ion, J. Fernandez, C. Teichteil and A. Dargelos 114 (1987) 201
Reaction of exciplex formation in the gas phase. Potential curve crossing approach, I. Deperasińska and J. Prochorow 114 (1987) 251
Vibrational relaxation rate constants for SF_6 from thermal lensing studies, R.T. Bailey, F.R. Cruickshank, R. Guthrie, D. Pugh and I.J.M. Weir 114 (1987) 411
Fluorescence yields from photodissociative excitation of chloromethanes by vacuum ultraviolet radiation, L.C. Lee and M. Suto 114 (1987) 423
The isokinetic relatioship. V. Investigation of bimolecular reaction systems, W. Linert 114 (1987) 449
The isokinetic relatioship.VI. Equilibrium systems, W. Linert 114 (1987) 457

Supersonic beams
Spectroscopy of jet-cooled perylene-d_{12}, M. Sulkes 114 (1987) 289
Dynamical competition between reactive and reactive detachment channels in $X^- + H_2$ colliding systems (X = Cl,Br,I), M. Durup-Ferguson, J.C. Brenot, J.A. Fayeton, K. Provost and M. Barat 114 (1987) 389

Liquid mixtures and solutions
Low-field CIDNP study of photoinduced electron transfer reactions, A.I. Kruppa, T.V. Leshina, R.Z. Sagdeev, E.C. Korolenko and N.V. Shokhirev 114 (1987) 95
A simple model for molecular vibrations in solution: application to hydrogen fluoride and its dimer in polar and non-polar solvents, F.J. Olivares del Valle and J. Tomasi 114 (1987) 231
The isokinetic relatioship. V. Investigation of bimolecular reaction systems, W. Linert 114 (1987) 449
The isokinetic relatioship.VI. Equilibrium systems, W. Linert 114 (1987) 457

Crystals
Time-resolved electronic Raman spectrum of terbium aluminum garnet excited with visible and UV laser sources, P. Myslynski and J.A. Koningstein 114 (1987) 137
Raman spectra and phase transition of the phenothiazine crystal, H. Nakayama and K. Ishii 114 (1987) 431

–mixed
Crystal constraints and photochemical H-transfer in the acridine–fluorene mixed crystal, D.P. Craig, R.N. Lindsay, J.F. Ogilvie and D. Stehlik 114 (1987) 259

Liquid crystals
Symmetry simplifications in the description of molecular order and reorientational dynamics in uniaxial molecular systems. I. Symmetry constraints on the joint probability distribution function, J.J. Fisz 114 (1987) 165

Polymers
Symmetry simplifications in the description of molecular order and reorientational dynamics in uniaxial molecular systems. I. Symmetry constraints on the joint probability distribution function, J.J. Fisz 114 (1987) 165

Surfaces
Effective polarizability of two interacting adsorbed atoms, C. Girard, J.M. Vigoureux, D. van Labeke and Ph. Grossel 114 (1987) 209

Biological systems
Symmetry simplifications in the description of molecular order and reorientational dynamics in uniaxial molecular systems. I. Symmetry constraints on the joint probability distribution function, J.J. Fisz 114 (1987) 165

Microscopic systems

Atoms
Electronegativity and hardness in the chemical approximation, L. Komorowski 114 (1987) 55

Molecules (neutral and ionic)
Coupled cluster studies. IV. Analysis of the correlated wavefunction in canonical and localized orbital basis for ethylene, carbon monoxide, and carbon dioxide, W. Förner 114 (1987) 21
Electronegativity and hardness in the chemical approximation, L. Komorowski 114 (1987) 55
A study of valence ionization of ammonia with synchrotron radiation, M.S. Banna, H. Kossmann and V. Schmidt 114 (1987) 157

– diatomic
Adiabatic calculations of the $^2\Sigma_g^+$ excited states of He_2^+, A. Metropoulos, C.A. Nicolaides and R.J. Buenker 114 (1987) 1
Electronic states of titanium monoxide. An ab initio study, J.M. Sennesal and J. Schamps 114 (1987) 37
Resonances in collinear $He + H_2^+$ collisions, N. Sathyamurthy, M. Baer and T. Joseph 114 (1987) 73
Energy dependence of rotational and vibrational distributions of $N_2(C)$ for the $Ar^*(^3P_{0,2}) + N_2(X)$ excitation transfer reaction, E.J.W. van Vliembergen, E.J.D. Vredenbregt, G.H. Kaashoek, J.P.M.J. Jaspar, M.M.M. van Lanen, M.F.M. Janssens, M.J. Verheyen and H.C.W. Beijerinck 114 (1987) 117
A simple model for molecular vibrations in solution: application to hydrogen fluoride and its dimer in polar and non-polar solvents, F.J. Olivares del Valle and J. Tomasi 114 (1987) 231
Photoabsorption and photodissociation cross sections of CO between 88.5 and 115 nm, C. Letzelter, M. Eidelsberg, F. Rostas, J. Breton and B. Thieblemont 114 (1987) 273
Potential energy curves and spectral properties for electronic states of F_2 and F_2^+, D.C. Cartwright and P.J. Hay 114 (1987) 305

LCGTO MP LSD calculations for the diatomics PdX (X = C, Si, Ge, Sn), N. Russo, J. Andzelm and D.R. Salahub 114 (1987) 331
Non-adiabatic coupling in the autoionizing He(2 ^{3}S)–H_2 system, J. Vojtík, I. Paidarová and F. Schneider 114 (1987) 369

– small polyatomics
The analytic evaluation of second-order Møller–Plesset (MP2) dipole moment derivatives, E.D. Simandiras, R.D. Amos and N.C. Handy 114 (1987) 9
Valence bond diatomics-in-molecules models of the NH_2 radical, R. Polák and J. Vojtík 114 (1987) 43
Dissociation of water by controlled electron impact: rotational and translational energies of OH(X $^2\Pi_i$) fragment, H. Kawazumi and T. Ogawa 114 (1987) 149
A study of valence ionization of ammonia with synchrotron radiation, M.S. Banna, H. Kossmann and V. Schmidt 114 (1987) 157
The identification of normal mode behavior in the resonance picture of local mode dynamics: normal mode splitting, stability of periodic orbits and energy transfer rates for coupled Morse oscillators, R.B. Shirts 114 (1987) 187
Ab initio calculations of spin–orbit coupling in the SnH_4^+ ion, J. Fernandez, C. Teichteil and A. Dargelos 114 (1987) 201
Distorted wave calculations of vibrational excitation in CO_2 + He and CO_2 + Ar collisions, M.M. Novak, G.G. Balint-Kurti and D.C. Clary 114 (1987) 221
Two-configuration potential energy surface for the Ca + HF → CaF + H reaction, M. Paniagua and E. San-Fabian 114 (1987) 241
Infinite order sudden approximation treatment of the H + D_2 → HD + D reaction, Y.C. Zhang, Z.-H. Zhang, D.J. Kouri and M. Baer 114 (1987) 267
Three-atom indirect exchange reactions. II. Dynamical behaviours explained by a simple model, P. Halvick, J.C. Rayez, M.T. Rayez and B. Duguay 114 (1987) 375
Vibrational relaxation rate constants for SF_6 from thermal lensing studies, R.T. Bailey, F.R. Cruickshank, R. Guthrie, D. Pugh and I.J.M. Weir 114 (1987) 411
The laser excitation spectrum of selenoformaldehyde: vibrational analysis of the $\tilde{A}\ ^1A_2 \leftarrow \tilde{X}\ ^1A_1$ and $\tilde{a}\ ^3A_2 \leftarrow \tilde{X}\ ^1A_1$ electronic transitions, D.J. Clouthier, R.H. Judge and D.C. Moule 114 (1987) 417
Fluorescence yields from photodissociative excitation of chloromethanes by vacuum ultraviolet radiation, L.C. Lee and M. Suto 114 (1987) 423

– aromatics
Collisional deactivation of highly vibrationally excited hexafluorobenzene molecules, T. Ichimura, M. Takahashi and Y. Mori 114 (1987) 111
Spectroscopy of jet-cooled perylene-d_{12}, M. Sulkes 114 (1987) 289
A ^{17}O NMR study. On the correlation of ionization potentials and ^{17}O chemical shifts in 4-substituted pyridine-N-oxides and 4-substituted N-(benzylidene)phenylamine-N-oxides, K.A. Jørgensen 114 (1987) 443

Molecular aggregates

– dimers
A simple model for molecular vibrations in solution: application to hydrogen fluoride and its dimer in polar and non-polar solvents, F.J. Olivares del Valle and J. Tomasi 114 (1987) 231

– complexes
Reaction of exciplex formation in the gas phase. Potential curve crossing approach, I. Deperasińska and J. Prochorow 114 (1987) 251
Hydrogen bonded complexes and the HF vibrational energy distributions from the reaction of F atoms with NH_2 and NH_3, J.D. Goddard, D.J. Donaldson and J.J. Sloan 114 (1987) 321
Magnetic field effects due to spin–orbit coupling in transient intermediates, Yu.A. Serebrennikov and B.F. Minaev 114 (1987) 359

Free radicals (including hydronium and muonium)
Low-field CIDNP study of photoinduced electron transfer reactions, A.I. Kruppa, T.V. Leshina, R.Z. Sagdeev, E.C. Korolenko and N.V. Shokhirev 114 (1987) 95
Muonium diffusion in ice, S.-K. Leung, J.-C. Brodovitch, K.E. Newman and P.W. Percival 114 (1987) 399

Quasiparticles (including excitons)
Magnetic field effects due to spin–orbit coupling in transient intermediates, Yu.A. Serebrennikov and B.F. Minaev 114 (1987) 359

Ions and charge carriers
Time-resolved electronic Raman spectrum of terbium aluminum garnet excited with visible and UV laser sources, P. Myslynski and J.A. Koningstein 114 (1987) 137

PHENOMENA

Molecular structure
The analytic evaluation of second-order Møller–Plesset (MP2) dipole moment derivatives, E.D. Simandiras, R.D. Amos and N.C. Handy 114 (1987) 9
Electronegativity and hardness in the chemical approximation, L. Komorowski 114 (1987) 55
Potential energy curves and spectral properties for electronic states of F_2 and F_2^+, D.C. Cartwright and P.J. Hay 114 (1987) 305
LCGTO MP LSD calculations for the diatomics PdX (X = C, Si, Ge, Sn), N. Russo, J. Andzelm and D.R. Salahub 114 (1987) 331
Structural and spectral consequences of ion pairing. II. A theoretical study of $ClO_3^- Li^+$ and $ClO_3^- Na^+$, J.S. Francisco and I.H. Williams 114 (1987) 339

Vibrations and rotations of molecules
The analytic evaluation of second-order Møller–Plesset (MP2) dipole moment derivatives, E.D. Simandiras, R.D. Amos and N.C. Handy 114 (1987) 9
Energy dependence of rotational and vibrational distributions of $N_2(C)$ for the $Ar^*(^3P_{0,2}) + N_2(X)$ excitation transfer reaction, E.J.W. van Vliembergen, E.J.D. Vredenbregt, G.H. Kaashoek, J.P.M.J. Jaspar, M.M.M. van Lanen, M.F.M. Janssens, M.J. Verheyen and H.C.W. Beijerinck 114 (1987) 117
Symmetry simplifications in the description of molecular order and reorientational dynamics in uniaxial molecular systems. I. Symmetry constraints on the joint probability distribution function, J.J. Fisz 114 (1987) 165
The identification of normal mode behavior in the resonance picture of local mode dynamics: normal mode splitting, stability of periodic orbits and energy transfer

rates for coupled Morse oscillators, R.B. Shirts 114 (1987) 187
Distorted wave calculations of vibrational excitation in $CO_2 + He$ and $CO_2 + Ar$ collisions, M.M. Novak, G.G. Balint-Kurti and D.C. Clary 114 (1987) 221
A simple model for molecular vibrations in solution: application to hydrogen fluoride and its dimer in polar and non-polar solvents, F.J. Olivares del Valle and J. Tomasi 114 (1987) 231
Spectroscopy of jet-cooled perylene-d_{12}, M. Sulkes 114 (1987) 289
Laser schlieren study of vibrational relaxation of N_2 by H_2O, J. Kurian and A.K. Sreekanth 114 (1987) 295
Hydrogen bonded complexes and the HF vibrational energy distributions from the reaction of F atoms with NH_2 and NH_3, J.D. Goddard, D.J. Donaldson and J.J. Sloan 114 (1987) 321
Structural and spectral consequences of ion pairing. II. A theoretical study of $ClO_3^- Li^+$ and $ClO_3^- Na^+$, J.S. Francisco and I.H. Williams 114 (1987) 339
The isokinetic relatioship. V. Investigation of bimolecular reaction systems, W. Linert 114 (1987) 449
The isokinetic relatioship.VI. Equilibrium systems, W. Linert 114 (1987) 457

Electronic structure and states
Adiabatic calculations of the $^2\Sigma_g^+$ excited states of He_2^+, A. Metropoulos, C.A. Nicolaides and R.J. Buenker 114 (1987) 1
Electronic states of titanium monoxide. An ab initio study, J.M. Sennesal and J. Schamps 114 (1987) 37
Valence bond diatomics-in-molecules models of the NH_2 radical, R. Polák and J. Vojtík 114 (1987) 43
Electronegativity and hardness in the chemical approximation, L. Komorowski 114 (1987) 55
A study of valence ionization of ammonia with synchrotron radiation, M.S. Banna, H. Kossmann and V. Schmidt 114 (1987) 157
Potential energy curves and spectral properties for electronic states of F_2 and F_2^+, D.C. Cartwright and P.J. Hay 114 (1987) 305
LCGTO MP LSD calculations for the diatomics PdX (X = C, Si, Ge, Sn), N. Russo, J. Andzelm and D.R. Salahub 114 (1987) 331
The laser excitation spectrum of selenoformaldehyde: vibrational analysis of the $\tilde{A}\ ^1A_2 \leftarrow \tilde{X}\ ^1A_1$ and $\tilde{a}\ ^3A_2 \leftarrow \tilde{X}\ ^1A_1$ electronic transitions, D.J. Clouthier, R.H. Judge and D.C. Moule 114 (1987) 417
Fluorescence yields from photodissociative excitation of chloromethanes by vacuum ultraviolet radiation, L.C. Lee and M. Suto 114 (1987) 423

Electric and magnetic properties
A ^{17}O NMR study. On the correlation of ionization potentials and ^{17}O chemical shifts in 4-substituted pyridine-N-oxides and 4-substituted N-(benzylidene)phenylamine-N-oxides, K.A. Jørgensen 114 (1987) 443

Spin splittings
Ab initio calculations of spin–orbit coupling in the SnH_4^+ ion, J. Fernandez, C. Teichteil and A. Dargelos 114 (1987) 201

Optical activity
Potential energy curves and spectral properties for electronic states of F_2 and F_2^+, D.C. Cartwright and P.J. Hay 114 (1987) 305

Molecular interactions
Electronegativity and hardness in the chemical approximation, L. Komorowski 114 (1987) 55
Resonances in collinear He + H_2^+ collisions, N. Sathyamurthy, M. Baer and T. Joseph 114 (1987) 73
Quasiclassical trajectory study of the reaction $O(^3P) + HI \rightarrow OH + I$, A. Persky and M. Broida 114 (1987) 85
Crystal constraints and photochemical H-transfer in the acridine–fluorene mixed crystal, D.P. Craig, R.N. Lindsay, J.F. Ogilvie and D. Stehlik 114 (1987) 259
Hydrogen bonded complexes and the HF vibrational energy distributions from the reaction of F atoms with NH_2 and NH_3, J.D. Goddard, D.J. Donaldson and J.J. Sloan 114 (1987) 321

Spectral bandshapes and intensities
The analytic evaluation of second-order Møller–Plesset (MP2) dipole moment derivatives, E.D. Simandiras, R.D. Amos and N.C. Handy 114 (1987) 9

Coupling of electronic and nuclear motion
Adiabatic calculations of the $^2\Sigma_g^+$ excited states of He_2^+, A. Metropoulos, C.A. Nicolaides and R.J. Buenker 114 (1987) 1
Non-adiabatic coupling in the autoionizing He($2\ ^3S$)–H_2 system, J. Vojtík, I. Paidarová and F. Schneider 114 (1987) 369

Energy transfer processes
Collisional deactivation of highly vibrationally excited hexafluorobenzene molecules, T. Ichimura, M. Takahashi and Y. Mori 114 (1987) 111
Energy dependence of rotational and vibrational distributions of $N_2(C)$ for the $Ar^*(^3P_{0,2}) + N_2(X)$ excitation transfer reaction, E.J.W. van Vliembergen, E.J.D. Vredenbregt, G.H. Kaashoek, J.P.M.J. Jaspar, M.M.M. van Lanen, M.F.M. Janssens, M.J. Verheyen and H.C.W. Beijerinck 114 (1987) 117
Hydrogen bonded complexes and the HF vibrational energy distributions from the reaction of F atoms with NH_2 and NH_3, J.D. Goddard, D.J. Donaldson and J.J. Sloan 114 (1987) 321
The isokinetic relatioship. V. Investigation of bimolecular reaction systems, W. Linert 114 (1987) 449
The isokinetic relatioship.VI. Equilibrium systems, W. Linert 114 (1987) 457

Molecular photophysical processes
Dissociation of water by controlled electron impact: rotational and translational energies of $OH(X\ ^2\Pi_i)$ fragment, H. Kawazumi and T. Ogawa 114 (1987) 149
Photoabsorption and photodissociation cross sections of CO between 88.5 and 115 nm, C. Letzelter, M. Eidelsberg, F. Rostas, J. Breton and B. Thieblemont 114 (1987) 273

Intramolecular dynamics

– vibrational energy redistribution (including vibrational dissociation)
The identification of normal mode behavior in the resonance picture of local mode dynamics: normal mode splitting, stability of periodic orbits and energy transfer rates for coupled Morse oscillators, R.B. Shirts 114 (1987) 187
Distorted wave calculations of vibrational excitation in CO_2 + He and CO_2 + Ar collisions, M.M. Novak, G.G. Balint-Kurti and D.C. Clary 114 (1987) 221

Spectroscopy of jet-cooled perylene-d_{12}, M. Sulkes 114 (1987) 289
Vibrational relaxation rate constants for SF_6 from thermal lensing studies, R.T. Bailey, F.R. Cruickshank, R. Guthrie, D. Pugh and I.J.M. Weir 114 (1987) 411

Luminescence spectra, yields and lifetimes
Magnetic field effects due to spin–orbit coupling in transient intermediates, Yu.A. Serebrennikov and B.F. Minaev 114 (1987) 359
Fluorescence yields from photodissociative excitation of chloromethanes by vacuum ultraviolet radiation, L.C. Lee and M. Suto 114 (1987) 423

Non-linear responses (including optical)
Effective polarizability of two interacting adsorbed atoms, C. Girard, J.M. Vigoureux, D. van Labeke and Ph. Grossel 114 (1987) 209

Multiphoton phenomena
Multiple quantum NMR excitation with a one-quantum hamiltonian, D. Suter, S.B. Liu, J. Baum and A. Pines 114 (1987) 103
Time-resolved electronic Raman spectrum of terbium aluminum garnet excited with visible and UV laser sources, P. Myslynski and J.A. Koningstein 114 (1987) 137

Reactions (including dissociation)
Infinite order sudden approximation treatment of the $H + D_2 \rightarrow HD + D$ reaction, Y.C. Zhang, Z.-H. Zhang, D.J. Kouri and M. Baer 114 (1987) 267
Three-atom indirect exchange reactions. II. Dynamical behaviours explained by a simple model, P. Halvick, J.C. Rayez, M.T. Rayez and B. Duguay 114 (1987) 375
Dynamical competition between reactive and reactive detachment channels in $X^- + H_2$ colliding systems (X = Cl, Br, I), M. Durup-Ferguson, J.C. Brenot, J.A. Fayeton, K. Provost and M. Barat 114 (1987) 389

– gas phase
Resonances in collinear $He + H_2^+$ collisions, N. Sathyamurthy, M. Baer and T. Joseph 114 (1987) 73
Quasiclassical trajectory study of the reaction $O(^3P) + HI \rightarrow OH + I$, A. Persky and M. Broida 114 (1987) 85
Dissociation of water by controlled electron impact: rotational and translational energies of $OH(X\ ^2\Pi_i)$ fragment, H. Kawazumi and T. Ogawa 114 (1987) 149
Two-configuration potential energy surface for the $Ca + HF \rightarrow CaF + H$ reaction, M. Paniagua and E. San-Fabian 114 (1987) 241
Reaction of exciplex formation in the gas phase. Potential curve crossing approach, I. Deperasińska and J. Prochorow 114 (1987) 251
Infinite order sudden approximation treatment of the $H + D_2 \rightarrow HD + D$ reaction, Y.C. Zhang, Z.-H. Zhang, D.J. Kouri and M. Baer 114 (1987) 267
Non-adiabatic coupling in the autoionizing $He(2\ ^3S)–H_2$ system, J. Vojtík, I. Paidarová and F. Schneider 114 (1987) 369
Three-atom indirect exchange reactions. II. Dynamical behaviours explained by a simple model, P. Halvick, J.C. Rayez, M.T. Rayez and B. Duguay 114 (1987) 375

– photochemical
Low-field CIDNP study of photoinduced electron transfer reactions, A.I. Kruppa, T.V.

Leshina, R.Z. Sagdeev, E.C. Korolenko and N.V. Shokhirev 114 (1987) 95
Magnetic field effects due to spin–orbit coupling in transient intermediates, Yu.A. Serebrennikov and B.F. Minaev 114 (1987) 359
Fluorescence yields from photodissociative excitation of chloromethanes by vacuum ultraviolet radiation, L.C. Lee and M. Suto 114 (1987) 423

Electron transfer
Low-field CIDNP study of photoinduced electron transfer reactions, A.I. Kruppa, T.V. Leshina, R.Z. Sagdeev, E.C. Korolenko and N.V. Shokhirev 114 (1987) 95
Reaction of exciplex formation in the gas phase. Potential curve crossing approach, I. Deperasińska and J. Prochorow 114 (1987) 251
Dynamical competition between reactive and reactive detachment channels in $X^- + H_2$ colliding systems (X = Cl, Br, I), M. Durup-Ferguson, J.C. Brenot, J.A. Fayeton, K. Provost and M. Barat 114 (1987) 389

Ionization (including Rydberg states)
A study of valence ionization of ammonia with synchrotron radiation, M.S. Banna, H. Kossmann and V. Schmidt 114 (1987) 157
Ab initio calculations of spin–orbit coupling in the SnH_4^+ ion, J. Fernandez, C. Teichteil and A. Dargelos 114 (1987) 201
Non-adiabatic coupling in the autoionizing He($2\ ^3S$)–H_2 system, J. Vojtík, I. Paidarová and F. Schneider 114 (1987) 369

Molecular motion (including diffusive)
Muonium diffusion in ice, S.-K. Leung, J.-C. Brodovitch, K.E. Newman and P.W. Percival 114 (1987) 399

Isotopic effects
Quasiclassical trajectory study of the reaction $O(^3P) + HI \rightarrow OH + I$, A. Persky and M. Broida 114 (1987) 85

Collective motion and excitations
Multiple quantum NMR excitation with a one-quantum hamiltonian, D. Suter, S.B. Liu, J. Baum and A. Pines 114 (1987) 103

Structure of solids and liquids
Multiple quantum NMR excitation with a one-quantum hamiltonian, D. Suter, S.B. Liu, J. Baum and A. Pines 114 (1987) 103

Critical phenomena
Raman spectra and phase transition of the phenothiazine crystal, H. Nakayama and K. Ishii 114 (1987) 431

Phase transitions
Raman spectra and phase transition of the phenothiazine crystal, H. Nakayama and K. Ishii 114 (1987) 431